Volume 128, Number 60

The Weather

Today: Partly cloudy, 39°F (4°C) Tonight: Mostly clear, 27°F (-3°C) Tomorrow: Sunny but cold, High 37°F (3°C) Details, Page 2

Cambridge, Massachusetts 02139 Friday, December 5, 2008

Institute Chaplain Robert M. Randolph leads a prayer and a moment of silence for victims of the terror attacks in Mumbai, India during a candlelight vigil held in Killian Court on Tuesday evening.

OLPC Patent Infringement Suit Dismissed by Middlesex Judge

By Pearle Lipinski STAFF REPORTER

million in damages.

A Middlesex Superior Court Judge has dismissed the case against the One Laptop Per Child Foundation by Nigerian company Lagos Analysis Corporation (Lancor). Lancor claimed that the OLPC Foundation's XO laptop copied the design of Lancor's patented Konyin multi-lingual

A similar case is still pending in Nigeria, where a temporary injunction prohibits OLPC from distributing its laptops in Nigeria.

keyboards. The suit asked for \$20

In August 2007, Lancor sent OLPC a letter claiming that OLPC had reverse engineered its multilingual keyboard for the XO laptop formerly the "Hundred Dollar Laptop" — and asked for \$20 million for the "huge economic and financial loss" suffered by Lancor. OLPC refused to pay the sum, requesting proof that it had violated Lancor's Nigerian

Lancor filed suit for patent in-

and MIT professor Nicholas Negroponte '66, and Quanta Computer, the manufacturer of the XO laptop. Nigerian courts stopped OLPC from distributing and marketing the laptop in Nigeria in December 2007 and rejected the OLPC's February 2008 request for a dismissal.

Following its failure to have the cased dismisse in Nigeria, OLPC filed a preliminary action with the Massachusetts Middlesex Superior Court seeking declaratory relief, which would prevent the case from being brought to Massachusetts courts. Lancor claimed that OLPC had violated copyrighted information of the Konyin keyboards, a federal offense, and attempted to file suit in US federal court.

OLPC argued that Lancor's original case, that its trade secrets had been violated, was under the jurisdiction of state courts and the copyright infringement claim was unfounded. The case was remanded back to Middlesex in May, and the case was dismissed in October by Judge Thomas Feeley. The

The XO laptop was brought to Lancor's attention in January 2007 when a friend of Lancor founder Ade Oyegbola noticed a similarity between the Konyin keyboard and the XO keyboard. The Konyin keyboard was released in 2005 and has four shift keys that allow users to type accented letters. The XO laptop has one alternate shift key, which lets users add diacritics to letters as they type. In its suit, Lancor accused OLPC of copying the layout of the Konyin keyboard and stealing its software drivers.

A non-profit foundation started in 2005, OLPC aims provide quality low-cost laptops to children in developing and countries. OLPC's first laptop, the XO-1, has a 1200 x 900 7.5" LCD screen, wireless connectivity, and is resistant to heat and humidity. An updated version, the XO-2, is slated for release in 2010 and will feature dual touchscreens and will operate on only 1 watt, less than the XO-1's power consumption of 2-4 watts. A standard laptop runs uses 20-

As Nanoparticle Use Rises, So Does Concern Over Safety, Regulations

By Natasha Singer

THE NEW YORK TIMES

It sounds like a plot straight out of a science fiction novel by Michael Crichton. Toiletry companies formulate new cutting-edge creams and lotions that contain tiny components

designed to work more effectively. But those minuscule building blocks have an unexpected drawback: the ability to penetrate the skin, swarm through the body and overwhelm organs like the liver.

Humans have long lived in dread of such nightmare scenarios in which swarms of creatures attack. Alfred Hitchcock envisioned menacing flocks in "The Birds." In the 1990 film "Arachnophobia" a killer spider arrives in the United States, where it attacks and multiplies.

And now comes nanophobia, the fear that tiny components engineered on the nanoscale — that is, 100 nanometers or less — could run amok inside the body. A human hair, for example, is 50,000 to 100,000 nanometers in diameter. A nanoparticle of titanium dioxide in a sunscreen could be as small as 15 nanometers. (One nanometer equals a billionth of a me-

"The smaller a particle, the fur-

Nanoparticles, Page 8

College **Expenses** Outpacing Incomes

By Tamar Lewin

THE NEW YORK TIMES

The rising cost of college even before the recession - threatens to put higher education out of reach for most Americans, according to the biennial report from the National Center for Public Policy and Higher Education.

Over all, the report found, pubshed college tuition and fees increased 439 percent from 1982 to 2007 while median family income rose 147 percent. Student borrowing has more than doubled in the last decade, and students from lower-income families, on average, get smaller grants from the colleges they attend than students from more affluent families.

"If we go on this way for another 25 years, we won't have an affordable system of higher education," said Patrick M. Callan, president of the center, a nonpartisan organization that promotes access to higher

OPINION

India's 9/11:

College Costs, Page 11

How Mumbai stood up to

the terrorist attacks

MIT Responds to Students; MBTA Drops Federal Case

By Michael McGraw-Herdeg

This occasional feature will follow up on news stories long past their prime. In this edition: how MIT fired, and un-fired,

After Deadline ministrator;

support adand whatever

women's

happened to that MBTA lawsuit?

MBTA surrenders in Subway vs. Students?

A lawsuit against MIT students filed by the Massachusetts Bay Transit Authority was dropped in October.

The Massachusetts Bay Transit Authority sued three MIT students in August and sought to quash research apparently showing how anyone could get free T fare by copying an existing CharlieTicket or by making their

A gag order granted in early August kept the students from presenting their research at the summer's DEF CON hacker convention in Las Vegas. But the gag order was dissolved on Aug. 19, with the judge saying that the MBTA was unlikely to succeed on a claim that the research violated the Computer Fraud and Abuse Act.

Page 4

The case was dismissed by the MBTA on Oct. 7, with prejudice and

Women's support administrator's

After deciding to fire an MIT administrator in charge of supporting women on campus, MIT reversed its decision within weeks. She was unfired and reassigned to another department within the Institute.

In mid-April, MIT told Lynn A. Roberson, formerly Coordinator of Programs and Support for Women Students in Student Support Servic es, that it could no longer afford her services and would be firing her, according to an e-mail she sent to freshman women. Following student complaints, the decision was reversed by the end of April, with Roberson taking on a new job as associate director for student activities in the Student Activities Office.

According to Roberson's April 18 e-mail, "MIT will be terminating my position of Coordinator of Programs and Support for Women Students as of the end of June 2008, and I will be laid off."

After Deadline, Page 8

World & Nation 2 Opinion..... 4

Oliver G. Selfridge '45

By John Markoff

Oliver G. Selfridge '45, an innovator in early computer science and artificial intelligence, died Wednesday in Boston. He was 82.

The cause was injuries suffered in a fall on Sunday at his home in nearby Belmont, Mass., said his companion, Edwina L. Rissland.

Credited with coining the term "intelligent agents," for software programs capable of observing and responding to changes in their environment, Selfridge theorized about far more, including devices that would not only automate certain tasks but also learn through practice how to perform them better, faster and more cheaply.

Eventually, he said, machines would be able to analyze operator instructions to discern not just what users requested but what they actually wanted to occur, not always the same thing.

His 1958 paper "Pandemonium: A Paradigm for Learning," which proposed a collection of small components dubbed "demons" that together would allow machines to recognize patterns, was a landmark contribution to the emerging science of machine learning.

An early enthusiast about the potential of interactive computing, Selfridge saw his ideas summarized in a famous 1968 paper, "The Computer as a Communications Device," written by J.C.R. Licklider and Robert W. Taylor and published in the journal Science and Technology.

Honoring Selfridge, the authors proposed a device they referred to as OLIVER, an acronym for On-Line Interactive Vicarious Expediter and Responder. OLIVER was one of the clearest early descriptions of a computerized personal assistant.

With four other colleagues, Selfridge helped organize a 1956 conference at Dartmouth College that led directly to creation of the field of artificial intelligence.

"Oliver was one of the founding fathers of the discipline of artificial intelligence," said Eric Horvitz, a Microsoft researcher who is president of the Association for the Advancement of Artificial Intelligence. "He has been well known in the field for his early and prescient writings on the challenge of endowing machines with the ability to learn to recognize patterns."

Oliver Gordon Selfridge, a grandson of H. Gordon Selfridge, the American who founded Selfridges department store in London, was

Selfridge, Page 9

THE TECH December 5, 2008 Page 2

World & Nation

Struggling to Retain Power, **Canadian Leader Shuts Parliament**

By Ian Austen

Canada's parliamentary opposition reacted with outrage on Thursday after Prime Minister Stephen Harper shut down the legislature until Jan. 26, seeking to forestall a no-confidence vote that he was sure to lose and, possibly, provoking a constitutional crisis.

Harper acted after getting the approval of Governor General Michaelle Jean, who represents Queen Elizabeth as the nation's head of state. If his request had been rejected, he would have had to choose between stepping down or facing the no-confidence vote on Monday.

The opposition fiercely criticized the decision to suspend Parliament, accusing Harper of undermining the nation's democracy. "We have to say to Canadians, is this the kind of government you want?" said Bob Rae, a member of the opposition Liberal Party. "Do we want a party in place that is so undemocratic that it will not meet the House of Commons?'

Mexican Doctors, Saving Lives, Fear for Their Own

By Marc Lacey

THE NEW YORK TIMES

TIJUANA, MEXICO

The sedated patient, his bullet wounds still fresh from a shootout the night before, was lying in a gurney in the intensive care unit of a prestigious private hospital here late last month, with intravenous fluids dripping into his arm. Suddenly, steel-faced gunmen barged in and filled him with even more bullets. This time, he was dead for sure.

Hit men pursuing rivals into intensive care units and emergency rooms. Shootouts in lobbies and corridors. Doctors kidnapped and held for ransom, or threatened with death if a wounded gunman dies under their care. With alarming speed, Mexico's violent drug war is finding its way into the seeming sanctuary of the nation's hospitals, roiling the health-care system and leaving workers fearing for their lives while trying to save the lives of others.

'Remember that hospital scene from 'The Godfather?'" asked Dr. Hector Rico, an otolaryngologist here. In that scene, Michael Corleone saves his hospitalized father from a hit squad. "That's how we live."

Art Museum in Los Angeles At Pivot Point

By Edward Wyatt

and Jori Finkel

When this city's Museum of Contemporary Art appointed a classically trained curator from the Art Institute of Chicago as its director in 1999, many viewed it as a welcome sign that art rather than business would be kept at the forefront of one of the most dynamic museums in the country.

They did not know how right they were. Nearly 10 years later, the museum remains internationally renowned for its collection of postwar art and for organizing some of the most serious and ambitious contemporary art exhibitions anywhere.

Yet by putting art ahead of the bottom line, the Museum of Contemporary Art has nearly killed itself. The museum has operated at a deficit in six of the last eight years, and its endowment has shrunk to about \$6 million from nearly \$50 million in 1999, according to people who have been briefed on the finances.

Now the California attorney general has begun an audit to determine if the museum broke laws governing the use of restricted funds by nonprofit organizations. And a growing chorus of local artists, curators and collectors, including current and former board members, are lobbying to remove the museum's director, Jeremy Strick, its board, or both.

New Economic Bailout Plans May Focus on Homeowners

By Edmund L. Andrews THE NEW YORK TIMES

WASHINGTON

After pouring vast amounts of money into financial institutions of almost every type, and having little to show for it, the Bush administration and the Federal Reserve are suddenly taking a new look at ordinary homeowners.

Ben S. Bernanke, chairman of the Federal Reserve, warned Thursday that the soaring number of foreclosures threatened the economy. He then proposed some ideas - government-engineered loan modifications, and more taxpayer money to help people refinance — to keep people in their homes.

"The public policy case for reducing preventable foreclosures does not rely solely on the desire to help people who are in trouble," Bernanke said. "More needs to be done."

At the Treasury Department, meanwhile, top officials continued to work on a plan to boost the housing market by subsidizing 30-year home mortgages with rates as low as 4.5 percent — a level that homebuyers have not seen since the early 1960s.

Both actions highlighted how economic policymakers have come almost full circle. Since the financial crisis began last summer, both the Fed and the Treasury had focused almost exclusively on patching up the financial system — propping up banks, Wall Street firms, money market funds and issuers of commercial debt.

But the new focus on helping individuals could create a bitter split between those who want to buy homes and those who already own them. It has already opened up a rift between the real estate industry, which wants to increase sales, and the banking industry, which wants to get out from under staggering volumes of troubled mortgages.

Under a plan that top Treasury officials are considering, the Treasury Department would underwrite tens of billions of dollars worth of 30year, fixed-rate mortgages at rates far lower than most Americans have

According to Bankrate.com, the 30-year, fixed-rate mortgages fell Thursday to 5.58 percent, down from 5.76 percent last week. The 10-year Treasury note fell to 2.55 percent late Thursday, a new low.

But the cheap mortgages would be available only for people buying houses, not the roughly 50 million families that already have mortgages and would want to refinance at a lower rate.

As a result, the plan offers no direct relief to the millions of people who face foreclosure because they took out exotic mortgages that they could not afford. Nor would the plan offer any benefit to people who have stayed current on their mortgages and would simply be interested in taking advantage of a lower rate. As envisioned by Treasury officials, homeowners who now pay 6 percent would be watching new neighbors arrive whose monthly payments were almost one-third lower.

"At this point, our view is that such a program may do more harm than good," said Camden R. Fine, president of the Independent Community Bankers of America, which represents about 8,000 small banks. "You have thousands of banks that made loans and have them sitting on their books, and whose borrowers have worked their rear ends off to make the payments.

Obama Moves Fast to Fill Top Administration Posts

By Peter Baker and Michael Cooper

THE NEW YORK TIMES

CHICAGO

The call summoning him was somewhat cryptic. Only after Gen. James L. Jones showed up in a hotel suite for a one-on-one meeting with Barack Obama did it become clear what was going on.

Would General Jones be interested in a senior national security job? Obama asked. General Jones said he would be.

That was Oct. 22, a full 13 days before the election. This week, the two appeared together here as the president-elect announced that he was appointing Jones as his national security adviser.

Obama is moving more quickly to fill his administration's top ranks than any newly elected president in modern times. He has named virtually the entire top echelon of his White House staff and nearly half of his Cabinet. Just a month after his election. Obama has announced his selections for 13 of the 24 most important positions in a new administration.

By comparison, Bill Clinton had filled only one job in the top echelon a month into his transition, and Jimmy Carter and Ronald Reagan only two. Even the elder George Bush, who had the advantage of succeeding a fellow Republican, had picked just eight a month after his election. George W. Bush, stalled by the Florida recount, had named a chief of staff at this point in 2000 but was waiting to find out if he would even become president.

Obama's advisers are acutely aware that moving too quickly can cause mistakes. But accounts of the process emerging from participants suggest that the president-elect is trying to be decisive as well as methodical and secretive in filling out his administration, perhaps foreshadowing how he intends to run the government.

'You don't have time to waste," said Rahm Emanuel, the incoming White House chief of staff, who was named to his post two days after the election. "This is the worst economic situation since the Great Depression and the largest commitment of troops overseas since Richard Nixon. That's the world we're inheriting, and the president-elect said we don't have a moment to waste putting things together."

By comparison, Bill Clinton had filled only one job in the top echelon a month into his transition, and Jimmy Carter and Ronald Reagan only two. Even the elder George Bush, who had the advantage of succeeding a fellow Republican, had picked just eight a month after his election.

WEATHER

Ordering Up a Sunny Day By Brian H. Tang

Every now and then a story about a novel invention that modifies the weather becomes an attention grabbing flash in the pan with the popular media. Wouldn't it be great if you could order up sunny days every weekend and have it rain only at night? Florida homeowners would love nothing more than to set up a huge fan along the coast to blow hurricanes out to sea. Most attention in the arena of weather modification has been to prevent severe weather events, make it rain by seeding clouds, and reverse the effects of global climate change. Unfortunately, despite the rosy promises any method holds, there are often problems with feasibility, cost, scaling, reproducibility, and just plain lack of thought. For now, we mere mortals just have to deal with the weather or move to San Diego.

With that said, I wish I could conjure up a better weekend forecast. Saturday will be the better half despite the chilly weather, whereas Sunday will feature our first real risk of snow. Up till now, all the storms have passed to our west resulting in rainy, but relatively warm, conditions. As the storm track shifts closer to us, the threat of snow increases in the coming week or two. The first storm on Sunday will be relatively small in the form of snow showers and gusty winds. If you're a snow lover, rejoice. If not, there's always the hope of weather modification.

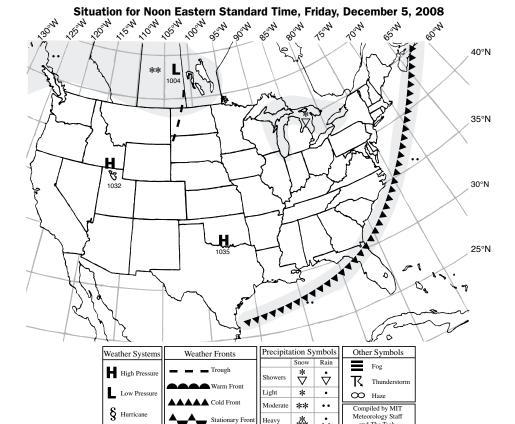
Extended Forecast

Today: Partly cloudy. High 39°F (4°C). Tonight: Mostly clear. Low 27°F (-3°C).

Tomorrow: Sunny but cold. High 37°F (3°C).

Tomorrow night: Increasing clouds with snow showers. Low 30°F (-1°C). Sunday: Cloudy with scattered snow showers. Becoming windy in the eve-

ning. High 38°F (3°C).



In Mumbai, More Evidence Links Terrorists to Pakistan

By Jane Perlez and Robert F. Worth

THE NEW YORK TIMES

ISLAMABAD, PAKISTAN

Fresh evidence unearthed Thursday by investigators in India indicated that the Mumbai attacks were stage-managed from at least two Pakistani cities by top leaders of the militant group Lashkar-e-Taiba.

Indian and U.S. intelligence officials have already identified a top Lashkar operative, Yusuf Muzammil, as a mastermind of the attacks. On Thursday, Indian investigators named a second commander, Zaki-ur-Rehman Lakhvi.

The names of both men came from the interrogations of the one surviving attacker, Muhammad Ajmal Kasab, 21, according to Rakesh

Maria, a deputy police commissioner in India.

While Muzammil appears to have served as a control officer in Lahore, Pakistan, Lakvhi, his boss and the operational commander of Lashkar, worked from Karachi, according to investigators in Mumbai.

It appears that both men were in contact with their charges as they sailed to Mumbai from Karachi, Pakistan, and then continued guiding the attacks even as they unfolded, directing the assaults and possibly providing real-time information about the police and military response in India

Some of the calls appeared to be conversations about who would live and who would die among the gunmen's hostages, according to an official who interviewed survivors and a report by security consultants with contacts among the investigators.

The new links emerged as Secretary of State Condoleezza Rice met in Islamabad with Pakistani leaders, a day after meeting with Indian leaders, to urge that the two countries work together to find the attackers' commanders and bring them to justice.

"What I heard was a commitment that this is the course that will be taken," Rice told reporters at Chaklala Air Base in Pakistan after meeting with President Asif Ali Zardari and Prime Minister Yousaf Raza Gilani.

But while Pakistan's leaders offered polite assurances, they made no public announcement of concrete measures that would be taken against Lashkar

Putin Questioned as Russian Economy Falters

By Michael Schwirtz

THE NEW YORK TIMES

MOSCOW

Prime Minister Vladimir V. Putin spent much of his annual questionand-answer televised exchange on Thursday seeking to reassure Russians that the effects of the global economic crisis on the country would be minimal. He also denied increased speculation that he might seek an early return to the presidency.

In a three-hour broadcast, Putin faced a barrage of questions from people across the country concerned about the decline in the value of the ruble, increased fuel costs, unpaid pensions and rising unemployment, among other issues.

When Putin started the annual broadcast as president seven years ago, the mood was different. Russia was at the start of a decade-long economic boom. The standard of living reached historic heights and Putin enjoyed huge popularity. With the onset of more difficult times, however, it is unclear how long either can be maintained.

At the beginning of the broadcast, Putin deflected responsibility for his country's economic woes, placing blame, as he has done before, squarely on what he called American recklessness.

"The crisis began in the United States, whose financial and economic policies led to the crisis that infected

the economies of practically all major countries of the world," he said.

In a sign, however, that Russia might be ready to put past antipathy aside to cooperate with the incoming Obama administration, he pulled back from the harsh criticism of the United States that has peppered his similar performances.

"We are really counting on this being a positive change," he said, adding that "positive signals" had been coming from President-elect Barack Obama and his team. "If these are not simply words, if they are transformed into practical policies, then, of course, our reaction will be adequate, and our American partners will immediately notice this."

For Alaskans, Begich Is A Different Kind of Senator

By William Yardley

THE NEW YORK TIMES

ANCHODACE ALACKA

To get elected in Alaska to the U.S. Senate as a Democrat sometimes requires not acting like one. Talk up drilling for oil in wildlife refuges. Talk up gun rights. Insist that those liberals who control Congress will never push you around.

And when your Republican rival is convicted in federal court shortly before Election Day, do not gloat. He is, after all, Sen. Ted Stevens, once decreed by the State Legislature as Alaskan of the Century.

Of course, that was last century.

Mayor Mark Begich of Anchorage is the Democrat who last month pulled off what once seemed unimaginable, becoming only the second Democrat from Alaska to win a seat in Washington since his father was a member of the House of Representatives nearly four decades ago.

His seat in the Senate has been occupied by Stevens since Begich was 6 years old and Alaska was just 9. But Begich, 46, suggests there is something larger at work in his victory than just good timing in taking on a suddenly vulnerable Stevens, who was convicted in October of failing to disclose gifts and home renovations he received from a wealthy oil services industry executive.

Strangers May Cheer You Up

By Pam Belluck

THE NEW YORK TIMES

How happy you are may depend on how happy your friends' friends' friends are, even if you don't know them at all.

And a cheery next-door neighbor has more effect on your happiness than your spouse's mood.

So says a new study that followed a large group of people for 20 years — happiness is more contagious than previously thought.

"Your happiness depends not just on your choices and actions, but also on the choices and actions of people you don't even know who are one, two and three degrees removed from you," said Dr. Nicholas A. Christakis, a physician and social scientist at Harvard Medical School and an author of the study, to be published Friday in BMJ, a British journal. "There's kind of an emotional quiet riot that occurs and takes on a life of its own, that people themselves may be unaware of. Emotions have a collective existence — they are not just an individual phenomenon."

In fact, said his co-author, James H. Fowler, an associate professor of political science at University of California, San Diego, their research found that "if your friend's friend's friend becomes happy, that has a bigger impact on you being happy than putting an extra \$5,000 in your pocket."

The researchers analyzed information on the happiness of 4,739 people and their connections with several thousand others — spouses, relatives, close friends, neighbors and co-workers — from 1983 to 2003.

The Sloan Subject Bidding (SloanBid) System Bidding Dates for Spring, 2009 Courses

https://sloanbid.mit.edu

First time logging in? Use your MIT ID as both your log in and password. Follow instructions on the site to change your password or retrieve lost passwords. Once logged in, make sure and check that your information (i.e. program of study and graduation date) is correct.

Institute-wide bidding for Sloan subjects:

Opens 9:00 a.m., Friday, December 19

Closes 5:00 p.m., Monday, December 29

Waitlist Round for closed Sloan subjects:

Opens 9:00 a.m., Friday, January 2 Closes 5:00 p.m., Friday, January 9

. , , ,

<u>Section Swap Round for sectioned Sloan subjects</u>: Opens 9:00 a.m., Tuesday, January 13

Closes 5:00 p.m., Tuesday, January 20

Please contact Scott Alessandro, <u>salessan@mit.edu</u>, if you have questions regarding Sloan Course Bidding.

Successful bids will appear on your Registration Form on February 2 and will be posted on the bidding website as of January 2 -- write down your password to check results!

Page 4 THE TECH December 5, 2008

OPINION

Chairman

Benjamin P. Gleitzman '09

Editor in Chief Nick Semenkovich '09

Business Manager Austin Chu G

Managing Editor Jessica Witchley '10

Executive EditorMichael McGraw-Herdeg G

NEWS STAFF

News and Features Director: Angeline Wang '09; Editors: Arkajit Dey '11, Jeff Guo '11, Natasha Plotkin '11: Associate Editors: Rvan Ko '11. Emily Prentice '11: Staff: Curt Fischer G, Ray C. He G, Ramya Sankar G, John A. Hawkinson'98, Daniela Cako'09, Diana Jue'09, Ji Qi '09, Yiwei Zhang '09, Yi Zhou '09, Nick Bushak '10, Yuri Hanada '10, JiHye Kim '10, Joyce Kwan '10, Jenny Liu '10, Joanne Y. Shih '10, Yan Huang '11, Elijah Jordan Turner '11, Lulu Wang '11, Omar Abudayyeh '12, Jessica Lin '12, Pearle Lipinski '12, Robert McQueen '12, Aditi Verma '12; Meteorologists: Cegeon Chan G, Garrett P. Marino G, Jon Moskaitis G, Roberto Rondanelli G, Scott Stransky G, Brian H. Tang G, John K. Williams G, Angela Zalucha

PRODUCTION STAFF

Editor: Steve Howland '11; Staff: K. Nichole Treadway '10, Alexander W. Dehnert '12.

OPINION STAFF

Editor: Andrew T. Lukmann G; Staff: Florence Gallez G, Gary Shu G, Keith A. Yost G, Josh Levinger '07, Krishna Gupta '09, Aditya Kohli '09, Jennifer Nelson '09, Daniel Yelin '10, Ethan Solomon '12.

SPORTS STAFF

Editor: Aaron Sampson '10; Staff: Nydia Ruleman '12, David Zhu '12.

ARTS STAFF

Editor: Praveen Rathinavelu '10; Staff: Bogdan Fedeles G, Andrew Lee '07, Tyson C. McNulty '08, S. Balaji Mani '10, Tina Ro '10, Kevin Wang '10, Maggie Liu '12.

PHOTOGRAPHY STAFF

Editors: David M. Templeton '08, Andrea Robles '10, William Yee '10; Associate Editors: Allison M. Alwan '12, Rachel Fong '12; Staff: Vincent Auyeung G, Alex H. Chan G, Alice Fan G, David Da He G, Perry Hung G, Maksim Imakaev G, Dmitry Kashlev G, Arthur Petron G, David Reshef G, Martin Segado G, Noah Spies G, Scott Johnston '03, Christina Kang '08, Martha Angela Wilcox '08, Chelsea Grimm '09, Ana Malagon '09, Peter H. Rigano '09, Eric D. Schmiedl '09, Jerzy Szablowski '09, Seth A. Villarreal '09, Diana Ye '09, Daniel P. Beauboeuf '10, Biyeun Buczyk '10, Arka P. Dhar '10, Mindy Eng '10, Helen Hou '10, Monica Kahn '10, Diane Rak '10, Jongu Shin '10, Dhaval Adjodah '11, Monica Gallegos '11, Michael Y. McCanna '11, Michael Meyer '11, Kari Williams '11, Sherry Yan '11, Andrew Shum '12, Meng Heng Touch '12.

CAMPUS LIFE STAFF

Editor: Charles Lin G; Staff: J. Graham Ruby G, David Shirokoff G, Jason Chan '09, Sarah C. Proehl '09, Michael Ciuffo '11, Michael T. Lin '11, Christine Yu '11; Cartoonists: Daniel Klein-Marcuschamer G, Roberto Perez-Franco G, Ben Peters '11.

BUSINESS STAF

Advertising Manager: Mark Thompson '11; Operations Manager: Michael Kuo '10; Staff: Neeharika Bhartiya '10, Jennifer Chu '10, Heymian Wong '10, Connie Chan '12, Sandra Chen '12, Mengjie Ding '12, Joseph Maurer '12, Greg Steinbrecher '12, Eric Trac '12.

TECHNOLOGY STAFF

Director: Ricardo Ramirez '09; **Staff:** Quentin Smith '10

EDITORS AT LARGE

Contributing Editors: Rosa Cao G, Brian Hemond G, Valery K. Brobbey '08, Caroline Huang '10; Senior Editors: Satwiksai Seshasai G, Shreyes Seshasai G, Jillian A. Berry '08, Omari Stephens '08, Sarah Dupuis '10.

ADVISORY BOARD

Paul E. Schindler, Jr. '74, V. Michael Bove '83, Barry S. Surman '84, Robert E. Malchman '85, Deborah A. Levinson '91, Jonathan E. D. Richmond PhD '91, Karen Kaplan '93, Saul Blumenthal '98, Frank Dabek '00, Daniel Ryan Bersak '02, Eric J. Cholankeril '02, Jordan Rubin '02, Nathan Collins SM '03, Keith J. Winstein '03, Akshay R. Patil '04, Tiffany Dohzen '06, Beckett W. Sterner '06, Marissa Vogt '06, Zachary Ozer '07, B. D. Colen.

PRODUCTION STAFF FOR THIS ISSUE

Editors: Jessica Witchley '10, Steve Howland '11, **Staff:** Austin Chu G.

The Tech (ISSN 0148-9607) is published on Tuesdays and Fridays during the academic year (except during MIT vacations), Wednesdays during January, and monthly during the summer by The Tech, Room W20-483, 84 Massachussetts Avenue, Cambridge, Mass. 02139, Subscriptions are \$45.00 per year (third class) and \$105.00 (first class). POSTMASTER: Please send all address changes to our mailing address: The Tech, P.O. Box 397029, Cambridge, Mass. 02139-7029. TELEPHONE: Editorial (617) 253-1541. Business: (617) 258-8324. Facsimile: (617) 258-8226. Advertising, subscription, and typesetting rates available. Entire contents © 2008 The Tech. Printed on recycled paper by Saltus Press.

India's 9/11

How My City Stood Up in the Face of Terror

Ankit J. Gordhandas

Wednesday, November 26, 2008. The date is now touted as India's 9/11.

All it took to lead me to panic was a oneline headline announcing the cold-blooded shooting of 50-odd people at a railway station in Mumbai. A railway station painfully close to where my parents work. A railway station some of my friends use every single day.

All I could do after my mind went numb was to frantically call my parents. Luckily they had reached home already before the events of the day began to unfurl. "The madness is just beginning," I said to myself, as I started scanning the news online.

The stories announced mindless shootings all around Mumbai; a police car was hijacked, a gas station blown up, and guests at two major hotels were held hostage.

My beloved city was under siege. As I watched it all unfold on the television, all I could think of was my eighteen years living in Mumbai. Having hot chocolate once a year in the coffee shop at the Taj Mahal Hotel, my parents driving me to the Oberoi Trident to see the holiday decorations, watching movies at the Metro Theater, just wandering around on the seafront.

Now, all these places were covered under a blanket of fear. Even though I was physically half a world away, I felt like I was there — as it happened.

A lot of people would like to hope that what transpired in the next 60 hours was only a bad dream. Unfortunately, every Mumbaikar's worst nightmare has come true. The terrorists lived up to their name; they instilled terror not just in everyone in Mumbai, but also in everyone even remotely associated with the city.

As the hours on the clock increased, so did the number of dead. At the end of the 60-hour drama, the official toll was close to 200 lives, though many believe that the actual number may be significantly higher than that.

My heart cannot help but reach out to those who were affected. Right from Hemant Karkare, the chief of the Anti Terrorist Squad (ATS), who died valiantly, to the unsung civilians who went down — but probably not without a fight

From the old parents who lost their only child, to Rabbi Holtzberg's two-year old son, baby Moche, who probably does not even know what death means. The number of people affected is significantly higher than the number of people who died.

In no way can anyone say that this was just an attack on India. The dead include Indians, Americans, English, and Israelis, among others. But most importantly, the dead were human. Yes, the attacks were an attack on humanity

And while tribute must be paid to those who lost their lives, we cannot forget those who put up a fight, and those who helped the people affected. Throughout the four-day ordeal, we heard stories of the hotel staff helping the hostages, of firemen not caring about their lives, doing their job while the attackers were still at large.

The photograph of a man carrying an injured person on his shoulders because there was no vehicle around will remain fresh in my mind for a long time. What gave me great hope was the unity of all people in Mumbai; even as the battle with the attackers was on, even as the city was volatile, close to 15,000 — yes, fifteen thousand — people attended the funeral of Mr. Karkare.

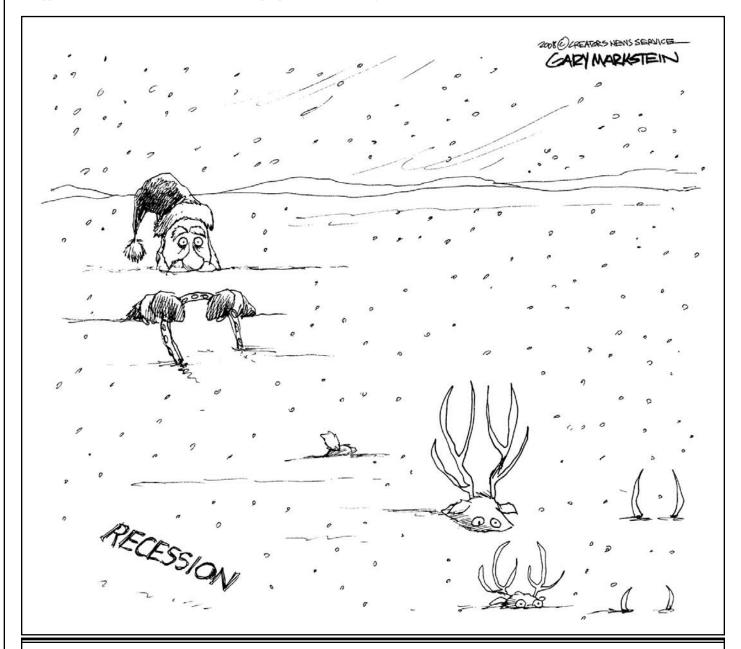
They were not just paying a tribute to a fallen soldier; they were also showing the terrorists their resolve and their unity. Today, that gives me great hope in this time of despair. While the terrorists may have been somewhat successful in terrorizing my city, its people refused to fall down. They decided to stand up together.

As long as that spirit resides in our hearts, no power can break us.

A friend of mine asked me this week, if I would be scared the next time I went home.

My answer was no. In fact, I will go home and visit all the places that were attacked, and like good old days will catch a movie in Metro, get hot chocolate at the Taj, absorb the holiday decorations at Oberoi Trident, and then wander around on the seafront. That will be my pilgrimage. That will complete my tribute.

Ankit Gordhandas is a member of the Class



Opinion Policy

Editorials are the official opinion of *The Tech*. They are written by the editorial board, which consists of Chairman Benjamin P. Gleitzman, Editor in Chief Nick Semenkovich, Managing Editor Jessica Witchley, Opinion Editor Andrew T. Lukmann, and Contributing Editor Rosa Cao.

Dissents are the opinions of signed members of the editorial board choosing to publish their disagreement with the editorial.

Letters to the editor, columns, and editorial cartoons are written by individuals and represent the opinion of the author, not necessarily that of the newspaper. Electronic submissions are encouraged and should be sent to *letters@the-tech.mit.edu*. Hard copy submissions should be addressed to The Tech, P.O. Box 397029, Cambridge, Mass. 02139-7029, or sent by interdepartmental mail to Room W20-483. All submissions are due by 4:30 p.m. two days before the date of publication.

Letters, columns, and cartoons must bear the authors' signatures, addresses, and phone numbers. Unsigned letters will not be accepted. *The Tech* reserves the right to edit or condense letters; shorter letters will be given higher priority. Once submitted, all letters become

property of *The Tech*, and will not be returned. Letters, columns, and cartoons may also be posted on *The Tech*'s Web site and/or printed or published in any other format or medium now known or later that becomes known. *The Tech* makes no commitment to publish all the letters received.

Guest columns are opinion articles submitted by members of the MIT or local community and have the author's name in italics. Columns without italics are written by *Tech* staff.

To Reach Us

The Tech's telephone number is (617) 253-1541. E-mail is the easiest way to reach any member of our staff. If you are unsure whom to contact, send mail to <code>general@the-tech.mit.edu</code>, and it will be directed to the appropriate person. You can reach the editor in chief by e-mailing <code>eic@the-tech.mit.edu</code>. Please send press releases, requests for coverage, and information about errors that call for correction to <code>news@the-tech.mit.edu</code>. Letters to the editor should be sent to <code>letters@the-tech.mit.edu</code>. The Tech can be found on the World Wide Web at <code>http://www-tech.mit.edu</code>.

ARTS

BOOK REVIEW

The Latest (and Earliest) From Kerouac and Burroughs

A Posthumous Pleasure

By S. Balaji Mani

And the Hippos Were Boiled in Their Tanks
Jack Kerouac and William S. Burroughs
Grove Press
Nov. 1, 2008
\$24.00

f you laughed along with Sal Paradise in On The Road, feared the conniving Dr. Benway in Naked Lunch, and saluted the iconoclastic verses of America, then you're undeniably a Beatnik. While Jack Kerouac, William S. Burroughs, and Allen Ginsberg are arguably the three most important authors of the Beat Generation, they are also our default historians of a transitional time period in the United States. Their uninhibited, jazz-inspired prose revealed a candid portrait of a class of people who embraced life in growing cities and welcomed experimentation.

Yet, the Beat Generation was always seen through the lens of its aforementioned semi-

nal works, all three of which tipped the literary scale to extremes. This November, though, the Estate of Jack Kerouac and the William S. Burroughs Trust teamed up to release a manuscript that had gained almost legendary status amongst literary circles. And the Hippos Were Boiled in Their Tanks is a joint work by the two Beat heroes penned in alternating chapters one summer during the 1940s.

One may wonder why such an essential work was kept unpublished for so long. Initially, the two novelists unsuccessfully pushed the manuscript to publisher after publisher, receiving little interest in return. The novel itself, the product of its creators' shared obsession and documentation of an actual murder, was deemed too sensational by editors. Any hope of the book being published was extinguished once the murderer himself — Lucien Carr, a real-life friend of the Beats — recognized his character in the novel, despite the use of the pseudonym 'Philip Tourian.' Carr prevented the book from reaching past the floorboards of

Kerouac's residence, where it was decided the manuscript would be permanently buried. Only now, after Carr's recent death in 2005, has the original text surfaced to mainstream attention.

The early publishers who first turned the work away are not to be criticized, however. The work is not breathtaking in its use of literary devices nor is the plot innovative enough to warrant distinction. The reader's prize, on the other hand, is an honest Kerouac and a careful Burroughs, both honing their literary style and taking risks in the Hippos manuscript. Written before either author was famous, Hippos is an unbiased and upfront sample of what preceded groundbreaking works such as On the Road. What's more important is that the characters, events, and places in Hippos are all real. As in most works put out by the Beats, pseudonyms are used to 'hide' the evident identities of key players like Allen Ginsberg, David Kammerer, and the narrators themselves.

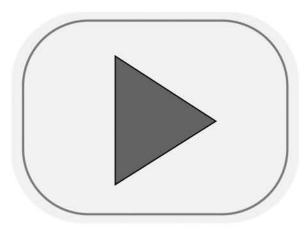
Part of what drove Kerouac and Burroughs to document their account of the events is that

Carr, a young aspiring writer at the time, sought their guidance after he committed the crime. While the two offered different solutions to Carr, both were now inadvertently involved in the crime. Lucien Carr was a murderer but in Hippos, that is just as banal a fact as Mike Ryko (Kerouac's alter-ego) being an enthusiastic drinker.

The murder itself might be sensational: a hatchet to the head, preceding a two story fall for David Kammerer, a wealthy, older man with a dangerous sexual appetite for Carr's virility and youth. But it is not merely the murder that this novel rests upon. It is the everyday movement and interaction between a close circle of friends and acquaintances; it is the episodes in which Carr can't decide if Kammerer is really a friend or a sexual predator; it is the life and heartbeat of 1940s New York. Above all, Hippos paints a picture of what life was like for Americans decades ago. It's certainly a clearer portrait of an unsuspecting Kerouac and Burroughs before they became, well, Kerouac and Burroughs.



A Cappella Yourself



toons fall concert!
Saturday, December 6
8 PM in 10-250



Want to get free movie tickets? Then write movie reviews for *The Tech*. (Advance screening opportunities also available!)

join@tech.mit.edu

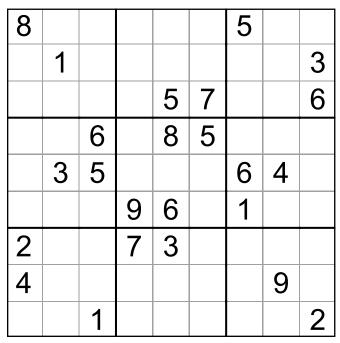




su do ku

© Puzzles by Pappocom

Instructions: Fill in the grid so that each column, row, and 3 by 3 grid contains exactly one of each of the digits 1 through 9.



Solution, tips, and computer program at http://www.sudoku.com

See also solution, page 8.

Pseudoscience

by Daniel Klein-Marcuschamer

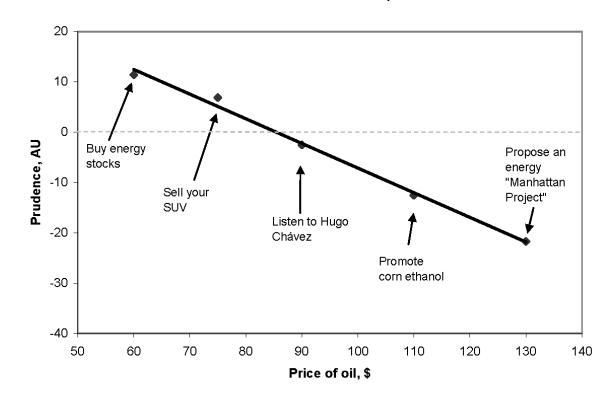
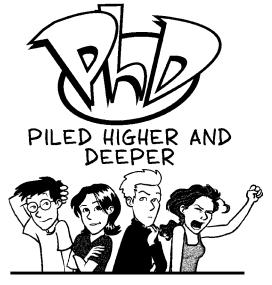
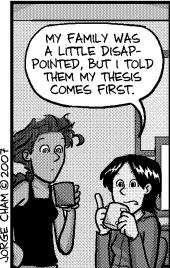


Figure 45. The graph plots the prudence (in arbitrary units) of key decisions at different oil prices. While buying energy stocks at relatively cheap oil prices and getting rid of large vehicles are positive in the prudence scale, an increase in the cost of the commodity induces a quasi-panic state in people that forces them to make a series of imprudent decisions. For example, paying attention to Mr. Chávez and promoting corn-derived ethanol make little sense, yet these actions have been frequently observed at high oil prices. A Manhattan Project-like endeavor would be both costly and useless, a combination that puts it lowest in the prudence scale.











WWW.PHDCOMICS.COM

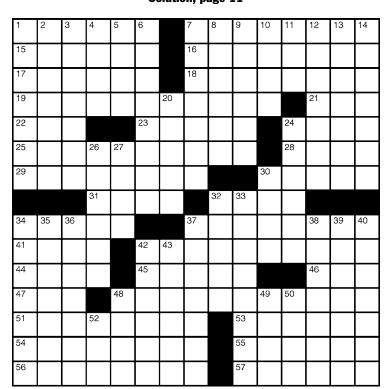
Page 7

Doonesbury

BY GARRY TRUDEAU

Dilbert® by Scott Adams

Crossword Puzzle



ACROSS

- 1 Come within sight 47 Psychic's letters
- 7 Glued
- 15 Outer edge of a cut gem 16 Large
- 17 Garland for the head
- 18 Certain protozoans
- 19 Alcoholic beverages
- 21 Alias letters
- 22 Highlands' refusal 57 Records
- 23 Very short time 24 Blue dye
- 25 Subjected to privation
- 28 __ Cong
- 29 Precedent setter 30 Thunder and
- laughter sounds 31 Orion feature
- 32 Make indistinct
- 34 Church recesses
- 37 Gorbachev policy
- 41 Permits to 42 Long-distance
- 44 III-mannered child 45 Dwelling

ng the M.I.T. Community since 1989

- 46 Notable time
- 48 Increased the
- severity of 51 Rock similar to
- limestone
- 53 Thyroid treatment
- 54 Short, witty
- remark 55 Three-molecule
- combo 56 Shop dealing in
- tack

DOWN

- 1 Contrary to
- 2 Like a feather
- 3 Babblers 4 Caribbean taro
- 5 Answer-man Trebek
- 6 Remission 7 Euphoric drug
- 8 Manifest
- 9 Thawed
- 10 Greek goddess of discord
- 11 High-level DC grp. 12 Oberon's wife

- in Babylon 14 Purifies seawater
- 20 Reach a high point
- 24 Entrance to Hades
 - 26 Under ideal
 - circumstances
 - 27 Clinches
 - 30 Shove

 - 32 Dashing young man
 - 33 Red soil
 - 34 Planetary reflections
 - 35 Public image 36 Fastened
 - mechanically
 - 37 Comestibles store
 - 38 Former
 - 39 More tranquil
 - 40 Stock exchange people
 - 42 Kingston or Kumin
 - 43 Decreaser
 - 48 Runner Zatopek 49 Brought into being
 - 50 Mine entrance

13 Hebrew prophet 52 Antiquated

... a necessary fact of College! order direct - NO middlemen!

ph - 617-625-3335

fx - 617-625-0404 email - info@qrsts.com





Join us for an Advent Service of

Lessons and Carols

Wednesday, December 10 5:15 pm - MIT Chapel

Christmas caroling in Lobby 7 following

All are welcome http://web.mit.edu/lem

supported by your student life fee



COME JOIN US FOR





FEATURING HARVARD'S SHANI!

> **FUN AND** FREE Food!

http://web.mit.edu/techiya

THE TECH December 5, 2008 Page 8

Administrator's Layoff Canceled | Though Nanoparticles

With Student Support, Roberson Was 'Un-Fired', Moved Positions

After Deadline, from Page 1

She explained the layoff as a problem of resources: the Department of Student Life told her that they needed to hire a full-time crisis support specialist, and that they could not also support her positions because of funding and headcount restrictions. "Perhaps there will be some distribution of my programs to other staff at the institute, but having this kind of pointperson for women students will cease, as it is now," she wrote.

"I also am feeling my own deep personal loss and grief, given the 22 years I have been a support to all you wonderful women students! ... Ever the optimist, I do wonder if a miracle can happen or something can be done to help avert this sad situation and be of benefit to everyone. But please do

know that whatever happens, I will remain a support to you in any way I can, now and in the future," she wrote.

Members of women's student groups like the Society for Women Engineers told MIT that they wanted Roberson to keep her job, and someone must have made a convincing case, because by the end of April, it appeared that her place at MIT was secure. Roberson moved from Student Support Services to Student Activities over the summer.

In mid-May, she sent a letter to freshman women thanking them for their support. "Although I do not know what many of you may have been doing behind the scenes, whatever you thought, wished, voiced or did, you have been heard, and it has created enormous benefit for all of us. ... You helped move everyone forward and opened further the pathways for women students at MIT ... Thank you for believing in a greater vision for yourselves and for all the women students at MIT!," she wrote.

Roberson declined to comment to The Tech on May 1.

Senior Associate Dean for Students Barbara A. Baker wrote on May 8 to a Tech reporter: "I am not sure what you are asking about. I wonder if you may have been misinformed, and while I am not able to comment in detail about personnel matters, I can say that Lynn's work has been and will continue to be part of a network of resources for women students and she continues to work at MIT on behalf of women students."

"MIT is fully committed to support all of our women students," Baker

The MIT Gilbert & Sullivan Players present

of Penzance
or, The Slave

The Pirates

12/5-12/6, 8 PM

12/7, 2 PM

12/II-12/I2, 8 PM

12/13, 2 PM

All performances in La Sala de Puerto Rico

Second floor MIT Student Center | 84 Massachusetts Avenue

Ticket Prices: MIT & Wellesley Students \$6 | other students, senior citizens,

May Penetrate Skin, The Actual Risk Is Unclear

Nanoparticles, from Page 1

ther it can travel through tissue, along airways or in blood vessels," said Dr. Adnan Nasir, a clinical assistant professor of dermatology at the University of North Carolina at Chapel Hill. "Especially if the nanoparticles are indestructible and accumulate and are not metabolized, if you accumulate them in the organs, the organs could

Indeed, some doctors, scientists and consumer advocates are concerned that many industries are adopting nanotechnology ahead of studies that would establish whether regular

of Dufy

ingestion, inhalation or dermal penetration of these particles constitute a health or environmental hazard. Personal care products are simply the lowest hanging fruit.

But people are already exposed to nanoparticles. Stoves and toaster ovens emit ultrafine particles of 2 to 30 nanometers, according to the National Institute of Standards and Technology; the researchers reported last month that long-term contact with such appliances could constitute a large exposure to the smallest of nanoparticles.

Some ingredients may behave differently as nanoparticles than they do in larger forms. Nano-sized silver, for example, can act as an antibacterial agent on the skin. Larger particles of zinc oxide and titanium dioxide result in white pasty sunscreens; but as nanoparticles, they appear more transparent.

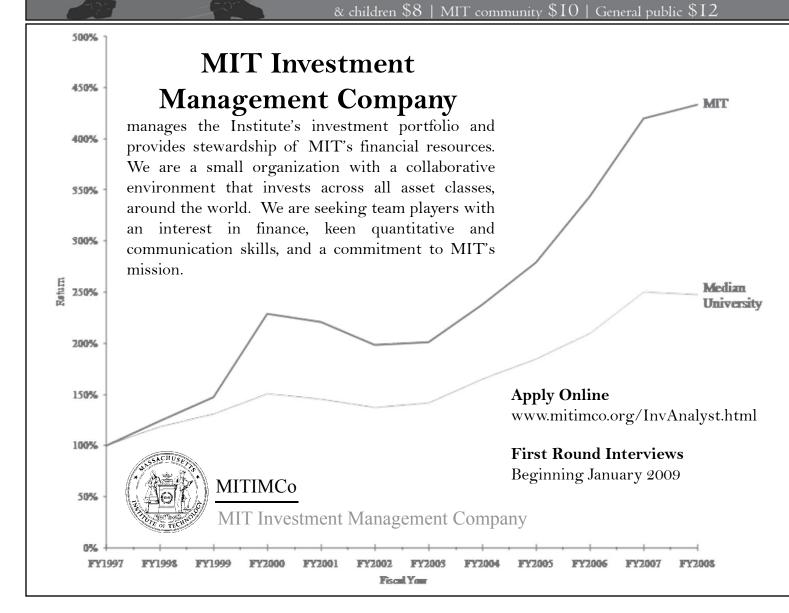
When it comes to beauty products, however, some consumer advocates are concerned that dynamic nanoparticles could pose risks to the skin or, if they penetrate the skin, to other parts of the body. Mineral sunscreens have attracted the most attention.

But cosmetics industry representatives said there was no evidence that personal care products that contain nano-size components constitute a health hazard. Furthermore, no rigorous clinical trials have been published showing that cosmetics with nanocomponents caused health problems. A review of the potential risks of nanomaterials, carried out for the European Center for Toxicology in 2006, concluded that sunscreens with metal nanoparticles were unlikely to penetrate healthy skin, but it did raise the question of whether safety studies should examine if such materials may penetrate damaged skin.

"It's very difficult to get anything through the skin," said John Bailey, the executive vice president for science of the Personal Care Products Council, an industry trade group in Washington. "The skin is a very effective barrier."

Indeed, some nanotechnology researchers said it was illogical to assume that a nano-size component inherently carries greater risk than a larger component. Furthermore, some say cosmetics may contain molecules like a silicone fluid called cyclopentasiloxane that are even smaller than nanomaterials.

"I think it's a double standard because nanoparticles are less likely to go through the skin than solutions where you are using single molecules," said Robert S. Langer ScD '74, a chemical engineering professor at the Massachusetts Institute of Technology in Cambridge. He is developing nanoparticles for the targeted delivery of cancer medications, and is a founder of Living Proof, a cosmetics company that makes hair products. "The molecules in a cream are certainly going to be smaller than a nanoparticle."



Solution to Sudoku 2 1 7 6 4 9 2 8 3 8 5 7 2 6 4 3 5 9 1 7 9 6 8 2 6 7 3 5 9 9 8 3 5 4

LEGAL COUNSEL

MIT students, family, employers and start-ups seeking U.S. legal counsel, campus or office consultation. Call:

James Dennis Leary, Esq. 321-544-0012

December 5, 2008 THE TECH Page 9

Selfridge Worked At Lincoln Labs, Wrote Books for Children

Selfridge, from Page 1

born in London on May 10, 1926. The family lost control of the business during the Depression and emigrated to the United States at the onset of World War II.

Selfridge attended Middlesex School in Concord, Mass., and the Massachusetts Institute of Technology, from which he graduated at 19 with a degree in mathematics. After service in the Navy, he embarked on graduate study at MIT under Norbert Weiner, the pioneering theorist of computer science. He became one of Weiner's collaborators but plunged into the working world of computer science before earning an advanced degree.

In the 1960s Selfridge was associate director for Project MAC, an early time-shared computing research project at MIT. He did much of this work at the MIT Lincoln Laboratory, a federally financed research center for security technology. He then worked at Bolt, Beranek & Newman, now BBN Technologies, which develops computer and communications-related technology. In 1983 he became chief scientist for the telecommunications company

He began advising the nation's national security leaders in the 1950s, among other tasks serving on the President's Foreign Intelligence

Advisory Board and the Scientific Advisory Board of the National Security Agency.

His first marriage, to Allison Gilman Selfridge, and his second, to Katherine Bull Selfridge, ended in divorce. Besides his companion, his survivors include their daughter, Olivia Selfridge Rissland of Belmont; three children from his first marriage, Peter Selfridge of Bethesda, Md.; Mallory Selfridge of Eastford, Conn.; and Caroline Selfridge of Saratoga, Calif.; a sister, Jennifer Selfridge MacLeod of Princeton Junction, N.J.; and six grandchildren.

Along with producing scholarly papers and technical books, Selfridge wrote "Fingers Come in Fives," "All About Mud" and "Trouble With Dragons," all books for children. At his death he was working on a series of books he hoped might one day become an arithmetic equivalent of summer reading projects for school-children.

Selfridge never stopped theorizing, speaking and writing on what he saw as the future of artificial intelligence

"I want an agent that can learn and adapt as I might," he once told a meeting organized by IBM. Such an agent would "infer what I would want it to do, from the updated purposes it has learned from working for me," he went on, and "do as I want rather than the silly things I might say."

13th EUROPEAN CAREER FAIR @ MIT

Jan 24-26, 2009 Open to everyone

LOOKING FOR A CAREER IN EUROPE?



WE STILL WANT YOUR RESUME!

SUBMIT YOUR RESUME ONLINE



BY DEC 10 AT

- 1411

WWW.euro-career.com
Uncle Sam image by J.M. Flagg, U.S. Department of Defense

got sperm?

SPERM DONORS NEEDED Up to \$1100 a month

Healthy MEN in college or with a college degree wanted for our sperm donor program.

Minimal time commitment

Help people fulfill their dreams of starting a family.

Receive free health and genetic screenings.

APPLY ONLINE:

www.SPERMBANK.com

New Horizons Dance Company Present



Little Kresge Auditorium

December 5-6, 2008 7:00pm



You know you want to! join@tech.mit.edu



Bring your Coop Card to The MIT Coop for special savings on thousands of books, MIT merchandise and select gifts.

20% OFF OUR ENTIRE STOCK OF

Paperback Books
Children's Books
Audio Books
Bargain Books for Kids and Adults
Calendars and Games
MIT Merchandise



COOP MEMBERSHIP PAYS! LAST YEAR'S REBATE WAS 7.5%

In Kendall Square and the Stratton Center I www.thecoop.com

Sale ends December 12, 2008. Discount can only be redeemed at The MIT Coop by Coop members with their Coop Member Card. Discount cannot be combined with any other discounts. Discount does not apply to textbooks, college rings, cap and gowns, insignia chairs, insignia diploma frames, special orders, or website purchases. Other exclusions may apply. See store for details.

Page 10 THE TECH December 5, 2008

Business or Economics Major?

Invest in You Invest Now



Substantial **scholarships**, up to full-tuition, are now being awarded to top applicants for a new one-year *Master's Program in Finance* beginning Fall 2009.

- Acquire the expertise you will need to succeed in the market place of the future.
- Leverage a dedicated career specialist and extensive alumni network in entering the market.
- Build your leadership potential in the co-curricular program and meet with distinguished speakers.

For more information, or to apply, visit **www.claremontmckenna.edu/rdsgraduate** or contact us at **rdsadmission@claremontmckenna.edu**.



500 E. NINTH STREET, CLAREMONT, CA 91711 TEL: 909-607-3347

Give Ideas.



IMAGINING MIT Designing a Campus for the 21st Century

William J. Mitchell
The story of our
decade long building
boom at MIT.
The MIT Press, 2007

The MIT Press, 2007 \$24.95, hardcover



NIGHTWORK

Institute Historian T. F. Peterson
The ultimate guide to MIT's long tradition of hacks and pranks.
The MIT Press, 2003
\$21.95, paperback



MIND AND HAND
The Birth of MIT
Julius Stratton

& Loretta Mannix
An account of
the intellectual
heritage of MIT.
The MIT Press, 2005
\$58.00, hardcover



BUILDING STATA

Nancy Joyce
The evolution and construction of Frank Gehry's latest building. Features many photos!
The MIT Press, 2004 \$32.00, paperback



VISIONS MIT Interviews

Andrea Frank
Insightful interviews
with 33 MIT faculty
members; with photos.
MIT, 2007
\$24.95, paperback



DESIGNING MIT

Mark Jarzombek
An illustrated history
of the design and
construction of MIT's
neoclassical campus.
Northeastern UP, 2004
\$29.95, hardcover



Books make great gifts—just think, no batteries, no assembly required, and easy to wrap! Best of all, good books can inspire, entertain, and inform—these are gifts that last a lifetime.

The friendly booksellers at The MIT Press Bookstore are always happy to make recommendations, and if books aren't your thing, we've got plenty other techie gifts for your perusal.

Come by the store for more "intriguing reading"!





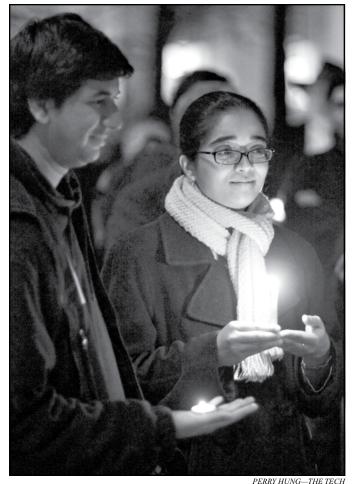
Intriguing reading from arts to sciences.

The MIT Press Bookstore

books@mit.edu, http://web.mit.edu/bookstore/www 292 Main St., Cambridge (617) 253-5249 Open Mon-Fri 9-7, Sat 10-6, Sun 12-6. check our website for special Holiday hours







PERRY HUNG—THE TECH

Anuja Mahashabde G joins members of the MIT community in Tuesday's candlelight vigil in Killian Court for those killed and wounded in the terror attacks in Mumbai, India.

LIKE STARTUPS?

Come to the Entrepreneur Showcase at the MIT Venture Capital Conference

Entrepreneurs, investors, and academics interact over 30 early stage companies exhibiting their products and services

This Saturday, Dec. 6, 4-7PM
The Charles Hotel, Harvard Square

www.mitvcconference.com/showcase



By 2036, Tuition Will Consume 24 Percent of Family Budgets

College Costs, from Page 1

education

"When we come out of the recession," Mr. Callan added, "we're really going to be in jeopardy, because the educational gap between our work force and the rest of the world will make it very hard to be competitive. Already, we're one of the few countries where 25- to 34-year-olds are less educated than older workers."

Although college enrollment has continued to rise in recent years, Mr. Callan said, it is not clear how long that can continue.

"The middle class has been financing it through debt," he said. "The scenario has been that families that have a history of sending kids to college will do whatever if takes, even if that means a huge amount of debt."

But low-income students, he said, will be less able to afford college. Already, he said, the strains are clear.

The report, "Measuring Up 2008," is one of the few to compare net college costs — that is, a year's tuition, fees, room and board, minus financial aid — against median family income. Those findings are stark. Last year, the net cost at a four-year public university amounted to 28 percent of the median family income, while a four-year private university cost 76 percent of the median family income.

The share of income required to pay for college, even with financial aid, has been growing especially fast for lower-income families, the report found.

Among the poorest families — those with incomes in the lowest 20 percent — the net cost of a year at a public university was 55 percent of median income, up from 39 percent in 1999-2000. At community colleges, long seen as a safety net, that cost was 49 percent of the poorest families' median income last year, up from 40 percent in 1999-2000.

The likelihood of large tuition increases next year is especially worrying, Mr. Callan said. "Most governors' budgets don't come out until January, but what we're seeing so far is Florida talking about a 15 percent increase, Washington State talking about a 20 percent increase, and California with a mixture of budget cuts and enrollment cuts," he said.

In a separate report released this week by the National Association of State Universities and Land-Grant Colleges, the public universities acknowledged the looming crisis, but painted a different picture.

That report emphasized that families have many higher-education choices, from community colleges, where tuition and fees averaged about \$3,200, to private research universities, where they cost more than \$33,000.

"We think public higher education is affordable right now, but we're concerned that it won't be,

Solution to Crossword

from page 7

A P P E A R C E M E N T E D
G I R D L E O V E R S I Z E
A N A D E M C I L I A T E S
I N T O X I C A N T S A K A
N A E T R I C E A N I L
S T R A I T E N E D V I E T
T E S T C A S E P E A L S
B E L T B L U R

A P S E S G L A S N O S T
L E T S M A R A T H O N E R
B R A T A B O D E E R A
E S P E X A C E R B A T E O
D O L O M I T E I O D I N E
S A D D L E R Y E N T E R S

if the changes we're seeing continue, and family income doesn't go up," said David Shulenburger, the group's vice president for academic affairs and co-author of the report. "The public conversation is very often in terms of a \$35,000 price tag, but what you get at major public research university is, for the most part, still affordable at 6,000 bucks

a year."

While tuition has risen at public universities, his report said, that has largely been to make up for declining state appropriations. The report offered its own cost projections, not including room and board.

"Projecting out to 2036, tuition would go from 11 percent of the family budget to 24 percent of the family budget, and that's pretty huge," Mr. Shulenburger said. "We only looked at tuition and fees because those are the only things we can control."

Looking at total costs, as families must, he said, his group shared

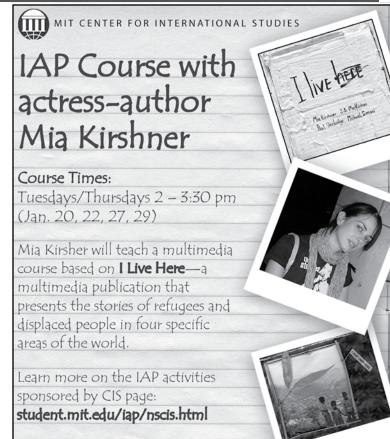
Mr. Callan's concerns.

Mr. Shulenburger's report suggested that public universities explore a variety of approaches to lower costs — distance learning, better use of senior year in high school, perhaps even shortening college from four years.

"There's an awful lot of experimentation going on right now, and that needs to go on," he said. "If you teach a course by distance with 1,000 students, does that affect learning? Till we know the answer, it's difficult to control costs in ways that don't affect quality."

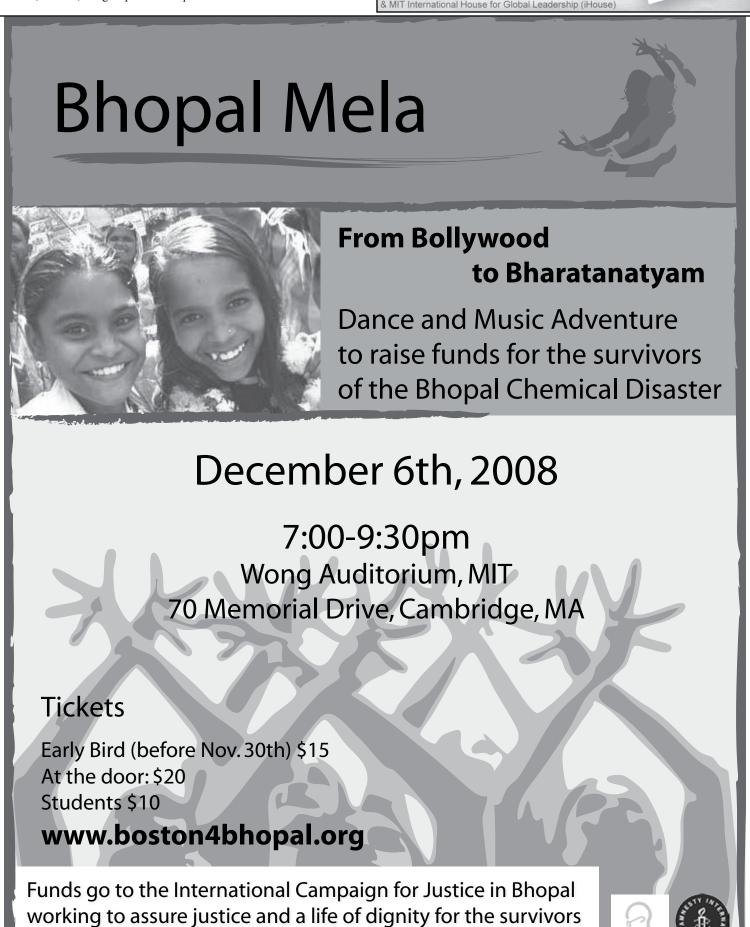
Mr. Callan, for his part, urged a reversal in states' approach to higher-education financing.

"When the economy is good, and state universities are somewhat better funded, we raise tuition as little as possible," he said. "When the economy is bad, we raise tuition and sock it to families, when people can least afford it. That's exactly the opposite of what we need."



web.mit.edu/cis | web.mit.edu/ihouse

Co-Sponsored by MIT Center for International Studies



of the world's worst industrial disaster.

THE TECH December 5, 2008 Page 12

Boston Blazers Lacrosse Signs Veteran Forward Dan Dawson

By Michael Gerhardt

The Boston Blazers professional indoor lacrosse team announced the signing of Dan Dawson, a multitalented, dynamic offensive player who consistently ranks among the top scorers in the National Lacrosse

Dawson, measuring a full six feet, five inches, and weighing in at 225 pounds, comes to Boston with seven years of experience in the league, and having earned a selection to the All-Pro First Team in two of those years. Last season, he played forward for the Portland LumberJax, scoring 38 goals and 43 assists en route to a Western Division title.

When asked about the Dawson signing, assistant coach Randy Fraser seemed very excited about Dawson and the upcoming season for the Blazers. "Having Dan is like having an extra coach on the floor," Fraser said. He added that Dawson helps to improve the younger players around him, including forwards

Matt Lyons and Brenden Thenhaus, who work the right side of the offense with Dawson. Dawson also constantly improves his own game by learning from other players, said Fraser, and that he is truly a student of the game.

One of the challenges to starting an expansion team, according to Coach Fraser, is that there is no core group to build a team around. The Blazers coaches hope Dawson can provide a starting point from which a successful team can be built by adding players who work well together and have great team chemistry. For example, the Blazers drafted leftie forward Daryl Veltman in the first round, looking for an offensive threat to start opposite the right-handed Dawson. Players like Mitch Belisle, a former New York Titan from Cornell, and Paul Dawson, Dan's younger brother, bolster the defense for Boston, and the two goalies Mike Poulin and Mike Muron are both looking strong in training camp.

After three weeks of training camp, Coach Fraser says preparations for the season opener against the New York Titans are going well. Practices are intense and competitive, with over 25 players vying for 18 spots on the dress list against the Titans. Fraser praises his team's performance in practice, noting the high level of play and team chemistry the Blazers display.

On days off, Dawson and several other representatives from the Blazers have been promoting leadership and the game of lacrosse in several Boston area middle schools. Coach Fraser welcomes fans of the Blazers to keep an eye out for community appearances and to stop by and say hello. More information can be found online at the Blazers' website, http://www.blazerslacrosse.com, including a schedule of community appearances under the Fan Zone link, and online ticket purchasing for the 2008 season.

Upcoming Home Events

Friday, Dec. 5, 2008

Rifle vs. Virginia Military Institute, Massachusetts Maritime Academy, and Wentworth Institute of Technology

Men's Swimming MIT Invitational Women's Swimming MIT Invitational 6 p.m., duPont Athletic Center 6:30 p.m., Zesiger Center 6:30 p.m., Zesiger Center

9 a.m., duPont Athletic Center

10 a.m., Zesiger Center

Saturday, Dec. 6, 2008

Rifle vs. Virginia Military Institute, Massachusetts Maritime Academy, and Wentworth Institute of Technology

Men's Swimming MIT Invitational Women's Swimming MIT Invitational Squash vs. Tufts University

10 a.m., Zesiger Center 11 a.m., Zesiger Center Women's Basketball vs. Bay Path College 1 p.m., Rockwell Cage Women's Ice Hockey vs. Manhattanville College

Men's Basketball vs. Tufts University Men's Swimming MIT Invitational Women's Swimming MIT Invitational

3 p.m., Johnson Athletic Center 3 p.m., Rockwell Cage 5:30 p.m., Zesiger Center 5:30 p.m., Zesiger Center

Eating Disorder Treatment

Treatment of Adults Suffering from Anorexia and Bulimia Nervosa



Informed clinicians refer their clients to Laurel Hill Inn. LHI provides the most effective treatment and deploys the highest staff-to-client ratio in New England. We provide extensive programming in a highly structured and supervised non-institutional

therapeutic setting. Evening, day, and residential treatment as well as weekly support groups in West Medford and West Somerville. Call Linda at 781 396-1116 or visit www.laurelhillinn.com.

MIT Official Sports GEAR

including hats, t-shirts and more items with the name of your favorite team!



To purchase items go ON-LINE: www.mitathletics.com then click on "Athletics Merchandise" ON CAMPUS: DAPER Main Desk, W35 lobby

Your purchase supports MIT sports programming. -Thank you!

Salem State Defeats MIT Men's Basketball, 75-65

Salem State College's balanced attack put five players in double figures and the Vikings' full-court press plagued MIT throughout the contest as the home team rallied past the Engineers, 75-65, despite another

phenomenal effort from James M. "Jimmy" Bartolotta '09, who played his third consecutive game with at least 30 points on Tuesday night.

Bartolotta closed with 34 points on 13-of-23 shooting to pace an MIT attack that held a 50-42 lead with 11 minutes left in regulation. Forc-

ing the Engineers to commit a season-high 31 turnovers, the Vikings scored 22 points in the second half on the takeaways en route to the dominating finish.

For the seventh straight game, MIT fell behind early and trailed 13-5 six minutes into the action. Consecutive three's by Erik S. Zuk '11, Willard J. "Billy" Johnson '09, and Bartolotta pushed the Engineers in front by one. After trading baskets with Salem over the next five minutes, MIT gradually pulled ahead. A Johnson free throw with 1:30 left in the first half provided MIT with its biggest lead of the game at 35-23. The Vikings scored the final five points of the half to close the deficit to seven at the break.

Salem State opened the second half with an 11-5 run that reduced MIT's advantage to two. The Vikings turned up the pressure in the last 11 minutes of the game, outscoring MIT, 33-15, while ending the battle with 18 steals. The full-court press also hampered the Tech offense down the stretch as MIT shot 1-of-7 from beyond the arc despite shooting 45 percent in the first half.

—James Kramer, DAPER Staff

Franklin and Rubino Named ESPN The Magazine Academic All-Americans

MIT Football players Thomas J. Franklin '09 and Alexander F. Rubino '10 passed through a difficult and highly competitive selection process en route to ESPN The Magazine Academic All-America honors as recently announced by the College Sports Information Directors of America (CoSIDA). The selections boosted the football program's contingent to an Institute-best 27 accolades; MIT maintains its position as the all-time NCAA Division III leader with 151 honors since

As a four-year starter at tight end, Franklin developed into an outstanding blocker during his career and helped guide the Engineers to the ninth-best rushing attack in the nation this season. Franklin is a member of the National Society of Collegiate Scholars as well as Tau Beta Pi Engineering Honor Society. Set to graduate with a 5.0 grade point average in Aerospace Engineering, Franklin is a recipient of the Society of Flight Test Engineers Scholarship.

Rubino earned Academic All-America Second Team honors after a season in which he served as MIT's most disruptive defender. Rubino paced the Engineers' defensive corps with 47 solo tackles while ranking fifth among lineman in the New England Football Conference (NEFC) with 63 total stops. A Chemical Engineering major with a 5.0 grade point average, Rubino's academic achievements include National Dean's List, National Society of Collegiate Scholars, Tau Beta Pi Engineering Honor Society, and NEFC All-Academic.

—James Kramer, DAPER Staff

SCOREBOARD

Men's Basketball Tuesday, Dec. 2, 2008 MIT (4-3) Salem State College (4-1) 75

Women's Basketball	
Thursday, Dec. 4, 2008	
Albertus Magnus College (5-3)	60
MIT (2-4)	64

Men's Fencing	
Wednesday, Dec. 3, 2008	
MIT (3-3)	13
Boston College (1-0)	14
Brandeis University (8-0)	15
MIT (3-4)	12
Harvard University (4-0)	15
MIT (3-5)	12

Women's Fencing	
Wednesday, Dec. 3, 2008	
MIT (6-1)	16
Boston College (0-1)	11
Brandeis University (6-1)	19
MIT (6-2)	8
Harvard University (5-0)	22
MIT (6-3)	5



join@tech.mit.edu